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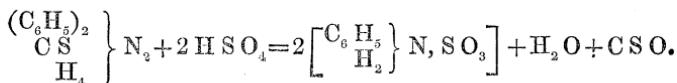
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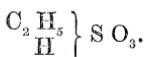


In the presence of an excess of sulphuric acid, the water-molecule eliminated is without influence upon sulphoxide of carbon.

Action of Nitric Acid upon Ethylic Mustard-oil.

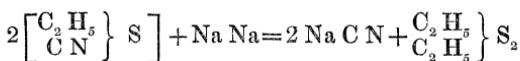
I have still to say a few words respecting the behaviour of ethylic mustard-oil with nitric acid, although the experience acquired in the several experiments I have described could not possibly leave any doubt on the nature of this reaction. Here, again, the ethyl-group separates, united with nitrogen, in the form of ethylamine, from the molecule, while the carbon and sulphur of the group C S are burnt and eliminated in the form of carbonic and sulphuric acids. The same deportment is exhibited by the homologues of ethylic mustard-oil, and also by the allyl-compound.

The products which are generated by the action of nitric acid upon sulphocyanide of ethyl and its homologues are known. According to the experiments of Muspratt, sulphocyanide of ethyl yields with nitric acid ethyl-sulphurous acid,



Accordingly there is also in this case elimination of the ethyl-group, in the form of a sulphur-compound.

In conclusion it may be stated that I have examined the action of several other chemical agents, and more especially of the alkali-metals and their hydrates, on the two classes of isomeric compounds. Most of the experiments, however, which I have made in this direction are not yet completed, and I will here only briefly allude to the elegant transformation which sulphocyanide of ethyl suffers in contact with metallic sodium. A powerful reaction ensues, cyanide of sodium and sulphide of ethyl being formed.



It affords me great pleasure to mention the energy and intelligence with which Dr. Bulk has assisted me during the performance of the experiments described in this paper. My best thanks are due to him.

III. "On the Solar Protuberances." By M. JANSSEN. In a Letter
to WARREN DE LA RUE, F.R.S. Communicated by Mr. DE LA
RUE. Received February 2, 1869.

"Je voulais vous écrire depuis longtemps pour vous faire part de mes travaux et vous remercier des bonnes et puissantes introductions que je vous dois. J'attendais que j'eusse quelque chose de complet à vous présenter, et j'ai été ainsi entraîné peu à peu.

" Vous connaissez maintenant la méthode que j'ai proposé pour l'étude des protubérances, et dont Mr. Norman Lockyer avait eu l'idée, m'écrivit-on, depuis deux années. J'ignorais cela, et c'est une circonstance qui a été favorable à Mr. Lockyer; car si j'avais su qu'on travaillait sur ce sujet, naturellement j'aurais, en citant l'idée émise, fait connaître immédiatement par le télégraphe les résultats que j'obtenais dans l'Inde. Mais je ne regrette pas que Mr. Lockyer soit parvenu séparément à la confirmation de ses idées. Je trouve qu'il le méritait. Nous restons aussi indépendants l'un de l'autre.

" Je dois vous dire que je viens de découvrir que les protubérances se rattachent au soleil par une atmosphère dont l'hydrogène forme la base, au moins générale, et qui enveloppe la photosphère. Cette atmosphère est basse, à niveau fort inégal et tourmenté; souvent elle ne dépasse pas les saillies de la photosphère. Les protubérances ne paraissent être que des portions soulevées, projetées, détachées de cette enveloppe. J'étudie aussi les taches, sujet difficile, mais qui promet d'importantes notions sur la constitution du soleil.

" J'aurai l'honneur, à l'issue de ces études, d'envoyer un mémoire à votre Société Royale, comme hommage rendu à sa grande et juste célébrité, et aussi comme témoignage de reconnaissance des bonnes réceptions que j'ai eues dans l'Inde et chez vous toutes les fois que j'y vais.

" Mais, en attendant, je vous prie de vouloir bien lui communiquer les résultats dont je vous fais part ici.

" Je suis, en ce moment, à Simla, résidence d'été du Gouverneur, où j'ai un beau ciel et 8000 de vos pieds au-dessous de moi. Je profite de ces heureuses conditions pour aborder ici toutes sortes d'études.

" Je serai encore dans le Bengale en Mars. J'aurai donc le temps de recevoir une lettre de vous, ce qui me ferait un bien grand plaisir. Je n'ai ici aucune nouvelle scientifique d'Angleterre, et bien peu de France."

February 11, 1869.

Dr. W. B. CARPENTER, Vice-President, in the Chair.

The following communications were read:—

I. "On the Structure and Development of the Skull of the Common Fowl (*Gallus domesticus*)."
By W. KITCHEN PARKER,
F.R.S. Received November 25, 1868.

(Abstract.)

In a former paper (Phil. Trans. 1866, vol. clvi. part 1, pp. 113-183, plates 7-15) I described the structure and development of the skull in the Ostrich tribe, and the structure of the adult skull of the Tinamou—a bird which connects the Fowls with the Ostriches, but which has an essentially struthious skull.